0,833 ± 0,155 g/cm^2 in the second evaluation (p<0,01). The mean reduction of the BMD was -1.7 ± 9.2% in the LS and -1.7 ± 3.3% in the WB. Fourteen (35%) patients had a reduction greater than 5% in LS, 9 (64%) of them were submitted to unrelated allogenic HCT, and 10 (71%) developed Graft Versus Host Disease (GVHD). Nine patients (13%) had a reduction greater than 5% in lean body mass. Fifteen patients (38%) had insufficient calcium intake in the first evaluation and 20 patients (50%) in the second evaluation. Seven patients (18%) had insufficient vitamin D intake in the first evaluation and 12 patients (30%) in the second evaluation. We found a positive correlation between changes in BMD in the whole body and changes in body weight (r = 0,38; p<0,01).

Conclusion: The prevalence of BMD and lean body mass reduction was high after six months of HSCT. There was an important decrease in the calcium and vitamin D intake. Children and adolescents undergoing HCT need nutritional intervention and we suggest a routine BMD evaluation in those who are at risk for reduction in bone mass.

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A POPULATION-BASED SINGLE INSTITUTION EVALUATION OF 16 YEARS OF ALLOGENEIC HSCT IN CHILDHOOD ALL

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ALL remains one of the most important causes of haematopoietic stem cell transplantation (HSCT) in children. The outcome of the procedure depends on several factors e.g.: 1) ALL subtype 2) pre transplant treatment 3) leukaemia stage at transplantation 4) conditioning regimen and GvH prophylaxis 5) donor selection and 6) quality of supportive treatment. In a retrospective analysis of population-based data prospectively collected we made an attempt to analyse these factors in a Danish context.

Patients: The course of 85 children <18 years diagnosed between 1–1 1992 and Oct 2008 was examined. This cohort constituted all children with ALL transplanted in Denmark in this period. All patients were transplanted at the same centre. Forty-five patients received first line treatment according to the Nordic NOPHO1992 protocol and 40 patients according to the NOPHO2000 protocol.

Results: A significant improved survival was recorded between patients pre-treated according to the NOPHO1992 (KM 5y survival: 51%) and the later NOPHO2000 protocol (KM 5y survival: 70%). Since the overall survival results for the two treatment protocols are essentially the same the difference in transplant outcome is supposed to be due to transplant related causes. An analysis of the causes for this difference showed that predominantly TRM has declined in the later period but the risk for relapse also decreased. The survival chance of children transplanted with an HLA-id Sib donor was particularly good with a KM 5y-survival of around 80%. The survival of patients transplanted with an UD had a KM 5y-survival of around 60%. Among factors that were found to be important for the improved survival were the inclusion of etoposide in the conditioning regimen and the exclusion of MTX for GvH prophylaxis.

Conclusion: Significant improvement in survival of ALL children after HSCT has occurred within the past 16 years. It is presumed that during recent years patients in need of an HSCT are not in a better general condition than earlier and do not have a less aggressive disease. Never the less as well an improvement in TRM as in the risk of relapse explain the overall improvement in survival.

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REDUCTION OF TREATMENT RELATED MORTALITY AFTER STEM CELL TRANSPLANTATION IN CHILDREN AND ADOLESCENTS WITH ALL UNDERGOING ALLOGENEIC STEM CELL TRANSPLANTATION: THE VALUE OF SEVERE ADVERSE EVENT REPORTING

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Although allogeneic stem cell transplantation (alloSCT) effectively prevents relapse of acute lymphoblastic leukemia (ALL), transplant related mortality (TRM) may counterbalance that beneficial effect. In 2003 the BFM Study Group initiated a prospective international multicenter trial. aiming to standardize and harmonize the SCT procedure in order to minimize risk of TRM. The immediate reporting of severe adverse events (SAE) is mandatory in this ongoing study and the findings are regularly discussed within study committee meetings. Here we report on the frequency, incidence and outcome of SAE's in study protocol patients who underwent alloSCT between September 2003 and June 2008. 262 children and adolescents with ALL were recruited by 27 participating SCT centers. Indications for SCT were all high risk leukemia in any remission. Conditioning regimen was TBI+VP16 for SCT from MSD (matched sibling donor), TBI+VP16+ATG for SCT from MD (matched donor), and TBI+Flu+VP16+ATG for SCT from MMD (mismatched donor).

Results: Ninetyone forms reported on life threatening, fatal or unanticipated problems. Most common reported events were acute respiratory distress syndromes, disseminated viral infections , bacterial sepsis and acute GVHD grade III and IV. Veno-occlusive disease and other life threatening toxicities were rare events.The day 360-TRM was 5% in the MSD-group, 4% in the MD-group and 25% in the MMD group. Overall, 25/262 pts died due to treatment related events. Five pts died after MSD-SCT (all had a MMD-indication): 2 pts experienced multi organ failure (MOF) due to infections, 2 pts due to severe acute GVHD and 1 pt because of extensive chronic GVHD. In the MD-group (all were transplanted from unrelated donors) 11 pts had fatal treatment associated outcome: 8 infection associated MOF, 1 EBV-lymphoproliferative disease, 2 cerebral complications of unidentified origin, 1 severe bleeding). Four/11 pts underwent second SCT due to primary or secondary graft failure. Six pts died after MMD-SCT: 2 after a second or third transplant procedure due to graft failure, all of them were infection-associated (5 viral, 1 Listeria-meningitis). We conclude that the high quality performance of participating centers as well as excellent compliance to the recommended regimen, better diagnostic measures and (pre-emptive) treatment of infections, and close and prospective monitoring of all patients may contribute to the reduced TRM after alloSCT in children with ALL.

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PREVALENCE, RISK FACTORS AND MANAGEMENT OF METABOLIC SYNDROME AFTER STEM CELL TRANSPLANTATION IN PEDIATRIC PATIENTS

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Background: Metabolic syndrome (MS) is reported to be highly prevalent in survivors of cancer and allogeneic stem cell transplant (SCT). TBI, chemotherapy, GVHD and it's treatment have been implicated as factors leading to MS after allogeneic SCT.We report preliminary results of the study which is being done with the objectives 1) to estimate the prevalence of MS in children followed at a single US institution; 2) to analyze risk factors associated with the development of MS; and 3) to correlate MS with other endocrine disorders post-SCT.

Methods: All patients in the follow-up clinic (>1 year post-SCT) are screened for lipid profile, BP, BMI, waste-hip ratio, microalbuminuria. Diagnosis of MS is based on NCEP-ATPIII criteria. Once diagnosed, patients are retrospectively analyzed regarding demographics, type of SCT, pre-transplant BMI, occurrence and treatment of GVHD, associated endocrine issues. Patients are educated , placed on statins and liver function monitored periodically.

Results: 32 patients have been screened till date and 11 (34.3%) diagnosed with MS. The median age is 15 years (11–20 years); 6 female and 5 male. The median duration from SCT to diagnosis was 7.5 years (2.5–14.7 yrs). 7 patients received an allogeneic and 4 an autologous SCT with varied preparative regimens. The median BMI at the time of diagnosis was 22.74 (20.5–36.6). Only 3 (27%) patients were overweight (BMI > 25) at the time of SCT; there was an average BMI increase of 5.5 (0.98–9.4) in the interim between SCT and diagnosis. Hypertriglyceridemia and hypertension were the most